

CLAIMS

1. A footwear piece comprising:

2 a platform for supporting a wearer's foot and engaging an underlying
surface,

4 the platform having a) a rear heel region for engaging a wearer's heel
and b) a sole region forwardly of the heel region for engaging a portion of a
6 wearer's foot including the ball and toes of a wearer's foot; and

8 a fluid assembly comprising a first chamber containing a first quantity of
a first fluid,

10 the fluid assembly provided on the platform and configured so that as
a wearer of the footwear piece walks or runs, the wearer's heel is caused to
apply a force to the first chamber that causes at least a portion of the first
12 quantity of the first fluid to be discharged from the first chamber in such a
manner that impact forces imparted from the platform to the wearer's heel are
14 absorbed.

2. The footwear piece according to claim 1 wherein the fluid
2 assembly comprises a second chamber into which the discharged fluid from the
first chamber flows.

3. The footwear piece according to claim 2 wherein there is a
2 restriction provided between the first and second chambers that controls flow
of fluid from the first chamber into the second chamber.

4. The footwear piece according to claim 3 wherein the restriction
2 is defined by a valve.

2 5. The footwear piece according to claim 4 wherein the valve is adjustable to vary a rate at which fluid flows from the first chamber into the second chamber for a given pressure in the first chamber.

2 6. The footwear piece according to claim 4 wherein the valve restricts fluid flow from the first chamber into the second chamber to a greater extent than fluid flow from the second chamber into the first chamber.

2 7. The footwear piece according to claim 2 wherein the second chamber is provided on the platform and configured so that as a wearer of the footwear piece walks or runs the ball of the wearer's foot is caused to apply a
4 force to the second chamber that causes fluid in the second chamber to be discharged into the first chamber.

2 8. The footwear piece according to claim 1 wherein the first fluid comprises at least one of a liquid and a gas.

2 9. The footwear piece according to claim 1 wherein the first chamber is defined by a bladder made from at least one reconfigurable sheet layer.

2 10. The footwear piece according to claim 7 wherein the fluid flows in a first path in a first flow direction from the first chamber to the second chamber and oppositely to the first flow direction in the first flow path flowing
4 from the second chamber to the first chamber.

2 11. The footwear piece according to claim 7 wherein the fluid flows in a first path from the first chamber to the second chamber and in a second path spaced from the first path from the second chamber to the first chamber.

2 12. The footwear piece according to claim 1 wherein the fluid
assembly is repositionable relative to the platform to be installed in, and
separable from, the platform as a unit.

2 13. The footwear piece according to claim 4 wherein the valve
comprises a live hinge portion.

2 14. The footwear piece according to claim 1 wherein the fluid
assembly comprises a closed system within which the first fluid circulates.

2 15. A method of absorbing impact forces through a footwear piece on
a wearer's foot, the method comprising the steps of:

 providing a footwear piece comprising:

4 a) a platform for supporting a wearer's foot and engaging an underlying
surface and having a rear heel region for engaging a wearer's heel and a sole
6 region forwardly of the heel region for engaging a portion of a wearer's foot
including the ball and toes of a wearer's foot; and

8 b) a first fluid assembly with a first chamber capable of containing a first
quantity of a fluid; and

10 causing fluid in the first chamber to be discharged from the first chamber
as a wearer of the footwear piece walks or runs and the wearer's heel applies
12 a force to the first chamber such that impact forces imparted from the platform
to the wearer's heel are absorbed.

2 16. The method of absorbing impact forces through a footwear piece
on a wearer's foot according to claim 15 wherein the step of providing a
footwear piece comprises providing a footwear piece with a second chamber
4 and the step of causing fluid in the first chamber to be discharged comprises
causing fluid in the first chamber to be discharged to the second chamber.

17. The method of absorbing impact forces through a footwear piece
on a wearer's foot according to claim 16 further comprising the step of causing
fluid in the second chamber to flow into the first chamber as a wearer of the
footwear piece walks or runs and the ball of the wearer's foot is caused to
apply a force on the second chamber.

18. The method of absorbing impact forces through a footwear piece
on a wearer's foot according to claim 17 further comprising the step of
providing a restriction to flow between the first chamber and the second
chamber.

19. The method of absorbing impact forces through a footwear piece
on a wearer's foot according to claim 18 wherein the step of providing a
restriction comprises providing an adjustable valve through which a variable
restriction to flow between the first chamber and the second chamber can be
selected.

20. The method of absorbing impact forces through a footwear piece
on a wearer's foot according to claim 15 further comprising the steps of
providing a second fluid assembly similar to the first fluid assembly but with
different operating capabilities, selecting one of the first and second fluid
assemblies based on an ability to absorb impact forces based on at least one
of the foot size, weight, or body type of a wearer, and utilizing the selected one
of the first and second fluid assemblies.